

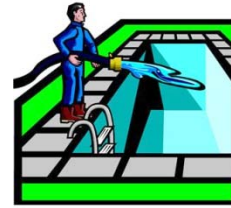
The Science of Irrigation: The History of Our Lawn and its Future

By [Melissa Baum-Haley, Ph.D.](#), MWDOC Water Use Efficiency Programs Specialist



One of the most elemental and increasingly important components of land cover change across the U.S. is the turfgrass yard. At a typical household with an irrigation system, more than 50% of the home's total water consumption is used for watering the lawn and landscape, and over-watering often occurs. So, why is our country so obsessed with the lawn?

According to the U.S. Environmental Protection Agency WaterSense Program, the national volume of water used for watering lawns and landscapes is more than 7 billion gallons per day, which is enough to fill 280,000 residential swimming pools. Nationally, turfgrass coverage is projected to be up to 40.5 million acres (that's nearly the size of Wisconsin) and, with the country's urban and built-up area estimated at nearly 60 million acres, the lawn can account for almost two-thirds of the American urban footprint. Although, with the past few decades, there has been a reduction in lawn size relative to lot size within the U.S., turfgrass coverage is still forecasted to increase. The estimated turfgrass coverage in the U.S. is three times greater than any other irrigated crop, including corn. In fact, in many parts of the country the current trend is to convert retired farmland into prime real estate.



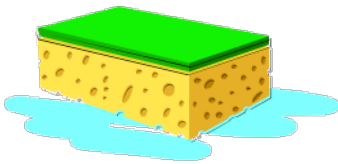
The American lawn has historically been thought of as a staple landscape indicative of one's right to the land and earned right to leisure time. This landscape was adopted from pre-romantic British culture developed prior to the 20th century. Broad reaching periodicals, such as *Better Homes and Gardens*, began encouraging homeowners to cooperate in neighborhood uniformity in the mid-1930s. Since World War II, there has been a fundamental change to the ecology of the lawn because of industrialization, becoming a fundamental part of the environment of the street. In 1950, *Home Garden* referred to the front lawn as the "Public Area – usually lying between the street and the house...It is the area enjoyed principally by the public and is important chiefly for its effect on community attractiveness."

A well-kept lawn became even more desirable when prompted by Lady Bird Johnson's national beautification program in the mid 1960s. In addition to calling attention to the aesthetic of roadsides and public spaces, this program urged people to pay attention to their own front lawns. Many municipal authorities began trying to encourage certain lawn color standards. The (unrealistic) year-round "velvety green carpet" increased in popularity, especially in retirement and vacation communities.

The lawn and landscape is a benefit to the community. Besides the obvious community pride of aesthetics, turfgrass and landscape integrated into the urban setting has been statistically proven to promote mental health, social harmony, and occupational

productivity. Further, physical benefits of turfgrass include erosion control, heat and noise dissipation, and air pollution control.

The desire for a dense green lawn often requires irrigation and fertilization, with the perception that both are commonly over applied, resulting in polluted runoff. Research has shown that even in areas with frequent rainfall, residential customers tend to over-irrigate.



The root zone of your lawn is a lot like a sponge filled with water...pouring more water on the sponge will not keep it full any longer. Excess water will not be absorbed, and water will drip out of the sponge. The same is true when watering your lawn and garden. Only the water applied to the lawn until the irrigated area reaches field capacity is beneficial. Any additional water applied will result in runoff or deep percolation.

The lawn isn't the only way to benefit from green-scapes. California Friendly and native plants are a beautiful way to replace or limit the amount of water-thirsty turfgrass. By removing turfgrass, you can lower your water bill and reduce the amount of polluted water runoff that leaves your property and eventually enters the ocean.

A growing trend is to limit turfgrass area with the replacement of sustainable green-scapes, groundcovers, or permeable surfaces. Did you know that you may be eligible to receive an incentive of \$1 per square foot (or more) to replace your lawn with lush, flowering California Friendly and native plants? The Municipal Water District of Orange County, the Metropolitan Water District, and your local water provider are offering (for a limited time) a turf removal incentive program to promote water use efficiency at Orange County residences, HOAs, and small businesses.

For more information regarding the Turf Removal Program, click [here](#).